REMARKS

1. Rejection of claims 1-11 under 35 U.S.C. 102(b) as being anticipated by figure 2 of Kothandaraman et al. (USP 6,147,520):

Applicant asserts that Kothandaraman et al. do not disclose adjusting an equivalent impendence through controlling the turn on time and the turn off time of first and second switch elements, as is claimed in claim 1 of the present invention. In figure 2 of USP 6,147,520, Kothandaraman et al. show a controlled impedance whose impedance value is controlled by a control circuit that "dynamically monitors the value of the resistances across bondpads 219-220 and 220-221, and turns on/off additional legs of transmission gates/resistors to control the impedance precisely." (col 2, lines 11-13) More specifically, for a particular impedance value, as long as there is not a large change in the operating temperature of the circuit, the different legs of transmission gates/resistors are either fixed open or fixed closed by the control circuit. Turn on time and turn off time of switch elements is not used by the control circuit to control the impedance value. Different legs are opened or closed when first obtaining a desired impedance, however, once the desired impedance value is obtained, the open or closed status of each leg generally does not change. In summary, Kothandaraman et al. teach using different essentially static open/close transmission gate settings to control the impedance value and generate a desired impedance value.

This is in contrast to the limitations cited in the present invention claim 1 impedance circuit, which controls the equivalent impedance value through controlling the turn on time and the turn off time of the first and second switch elements. In this way, for each particular impendence value, the open and closed status of the first and second switch elements is constantly changing. By controlling the turn on time and turn off time, the amount of average time that each switch element is turned on and the amount of average time that each switch element is turned off is controlled. According to the turn on time and turn off time for the switch elements, an overall equivalent impedance is apparent across the impedance circuit. Furthermore, by accurately controlling the turn on time and the turn off time for the first switch element and the second switch element (for example, the duty cycle of the first and

second control signals in claim 4), the equivalent impedance of the impedance circuit can be precisely controlled to a desired value. Because Kothandaraman et al. do not teach controlling the equivalent impedance in the same way as claimed in claim 1 of the present invention, pending claim 1 should be found allowable over the cited Kothandaraman patent. Claims 2 – 8 are dependent on claim 1 and are believed allowable for at least the same reasons. Reconsideration of independent claim 1 and dependent claims 2 – 8 is respectfully requested.

In claim 9, the equivalent impedance is determined by the first impedance and the second impedance, and by controlling the connecting time of the first impedance and the second impedance to the first node and the second node. Similar to the argument stated above, Kothandaraman et al. do not teach controlling the connecting time of a first impedance and a second impedance to a first node and a second node. Therefore, pending claim 9 should be found allowable over the cited Kothandaraman patent. Claims 10 – 11 are dependent on claim 9 and are believed allowable for at least the same reasons. Reconsideration of independent claim 9 and dependent claims 10 – 11 is respectfully requested.

2. New claims:

New claims 12 – 22 are added to further specifically claim the present invention as disclosed in the specification.

New independent claim 12 is similar to original claim 1, however, in claim 12 the equivalent impedance is determined by continuously turning on and off the first switch element, and continuously turning on and off the second switch element. Claims 13 – 18 are further limiting dependent claims on claim 12, and if claim 12 is found allowable, so too should be the additionally limiting dependent claims 13-18.

New independent claim 19 is similar to original claim 1, however, in claim 19 the equivalent impedance is determined through controlling frequencies of turning on and turning off the first switch element and the second switch element. Claims 21 – 22 are further limiting dependent claims on claim 19, and if claim 19 is found allowable, so too should be the additionally limiting dependent claims 21 – 22.

No new matter is introduced by new claims 12 – 22, and consideration of the new

claims is respectfully requested.

Sincerely,

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